

D.12 Transportation and Traffic

This section addresses the environmental setting and impacts related to the Proposed Project, the Existing Pipeline ROW Alternative, and the No Project Alternative. Specifically, Section D.12.1 provides a description of the environmental baseline, Section D.12.2 provides a description of applicable regulations, plans, and standards, Section D.12.3 presents the environmental impacts and mitigation measures for the Proposed Project, Sections D.12.4 and D.12.5 present the environmental impacts and mitigation measures for the Existing Pipeline ROW Alternative and No Project Alternative, respectively. The Mitigation Monitoring Program is presented in Section D.12.6.

D.12.1 Environmental Baseline

D.12.1.1 Regional Overview

The proposed pipeline route begins at SFPP's Concord Station in Contra Costa County then heads north paralleling Interstate 680 (I-680) into Solano County for approximately 17 miles to south of Cordelia. I-680 is a major north-south freeway serving Contra Costa and Solano Counties within the project area. I-680 connects the south and east San Francisco Bay areas to Solano County and Interstate 80 (I-80), which is an east-west freeway that provides direct access from San Francisco to Sacramento. South of Cordelia, the proposed route diverges from I-680 and heads northeast towards Fairfield and Suisun City, crossing numerous local roads along the way. In Suisun City, the route crosses Highway 12 then continues northeast paralleling the Union Pacific Railroad (UPRR) ROW the majority of the way up to approximately Vacaville Junction, where it continues eastward, crossing and paralleling more local roads until it meets an old railroad that is currently out of service. The pipeline route then parallels the old railroad into Yolo County. Four miles into Yolo County, the route diverges from the old railroad and heads north across agricultural land to I-80. The route crosses north of I-80 and parallels the UPRR to West Sacramento where it again crosses I-80 and follows local City of West Sacramento roads to SFPP's West Sacramento Station.

Existing Roadway Network

The roadway network that could potentially be affected by the Proposed Project includes the streets and highways in which the pipeline would be located, the streets and highways that would be crossed by the pipeline, and the streets and highways that run parallel and adjacent to the pipeline corridor. There are numerous roadway segments that would be directly impacted by pipeline construction because the pipeline route is proposed to be located within or immediately adjacent to their rights-of-way (ROWs). Encroachment is a term that is used to identify areas where the pipeline would be physically located within the road ROW, as opposed to crossings under a road overpass or crossings that are bored under a roadway. All Interstate highway crossings except at underpasses would be bored (SFPP, 2003). The names and locations of these roadway segments, the route milepost that the crossings and encroachments occur, applicable jurisdiction, general roadway classifications, the number of lanes, and the traffic volumes (estimated average daily trips) along each roadway are listed in Tables D.12-1 through D.12-6 for Segments 1 through 6, respectively (there are no roadway crossings on Segment 7, the Wickland Connection).

Existing Rail Facilities

The proposed pipeline route traverses several rail lines, which serve the Bay Area and greater Sacramento area. Railroad lines that could be affected by the project include the Burlington Northern Santa Fe Railroad (BNSF) and the Union Pacific Railroad (UPRR). The project route crosses the BNSF once in Contra Costa County. This line offers rail service west to Richmond and east to San Joaquin County. The proposed route crosses or parallels the UPRR many times along the 70 proposed pipeline route. The UPRR offers freight and commuter rail service from Concord to Sacramento. Amtrak runs eleven round trips daily on the UPRR's "Capital Corridor" between Oakland and Sacramento that include intermediate stops in Fremont, Martinez, Suisun/Fairfield, and Davis (BATI, 2003). Given the post-September 11, 2001, heightened-security environment, UPRR does not provide public information on the volume of freight train trips that use the Capital Corridor (UPRR, 2003a). In addition to the active rail lines discussed above, the pipeline route crosses an abandoned railroad ROW at several locations in Solano and Yolo Counties. It should be noted that all railroad ROW crossing would be constructed using bore techniques that would eliminate the need to actually encroach the railroad ROW. Tables D.12-1 through D.12-6 also show proposed railroad crossings.

Existing Transit Operations

Public transportation service along the proposed pipeline route includes bus and rail transit service. Bus service is offered in the project area by Contra Costa Transit Authority (County Connection), Benicia Transit, Fairfield/Suisun Transit, Yolo Bus, and UC Davis Unitrans (BATI, 2003). As described above, Amtrak provides rail service from the Bay Area to Sacramento along the UPRR Capital Corridor.

D.12.1.2 Environmental Setting: Proposed Project

Segment 1 (MP 0–6.1) – Contra Costa County and Carquinez Strait

Along the first six miles of the proposed pipeline route, the pipeline would cross under the ROW of two railroad lines (BNSF and UPRR), and encroach three streets that are under the jurisdiction of Contra Costa County and two private streets. See Table D.12-1 for the route milepost that crossings and encroachments occur, and the applicable jurisdiction, general classification, number of lanes, and the roadway traffic volumes along Segment 1.

Table D.12-1. Roadway/Railroad Encroachments and Crossings – Contra Costa County and Carquinez Strait

Roadway or Railroad (Location)	Relationship to Route (Pipeline MP)	Jurisdiction	Classification	Lanes	Traffic Volumes
Solano Way (Concord Station)	Parallel Encroachment (0.0 – 0.1)	Private	Private	2	NA ¹
BNSF (east of Pacheco Slough)	Crossing (1.5)	Private	–	–	–
Central Avenue (west of Pacheco Slough)	Parallel Encroachment (1.8 – 2.0)	Contra Costa County	Minor Urban	2	NA
Arthur Road (west of Waterbird Way)	Parallel Encroachment (2.4 – 2.5)	Private	Private	2	NA
Waterbird Way (Arthur Road to Shore Terminal Property)	Parallel Encroachment (2.5 – 3.3)	Contra Costa County	Collector	2	NA
UPRR (east of Waterfront Road)	Cross Encroachment (3.4)	Private	–	–	–
Waterfront Road (East of Interstate-680)	Cross Encroachment (3.4)	Contra Costa County	Arterial Rural	2	4,369

Notes: NA = not available

¹ Traffic volumes are expressed as average daily trips usually estimated from 24-hour to 7-day count data. Traffic volumes on Waterford Road were collected during December 2002.

Source: SFPP, 2002; Contra Costa County, 2003.

Segment 2 (MP 6.1–17.6) – Benicia and I-680 Frontage

Along the Benicia and Interstate 680 (I-680) segment of the proposed pipeline route, the pipeline would cross the ROW of the UPRR at two locations, cross Caltrans' I-680 at two locations, and encroach eleven roadways under the jurisdiction of the City of Benicia, Solano County, or the City of Fairfield. See Table D.12-2 for the route milepost that crossings and encroachments that would occur, and the applicable jurisdiction, general classification, number of lanes, and the roadway traffic volumes along Segment 2.

Table D.12-2. Roadway/Railroad Encroachments and Crossings – Benicia and I-680 Frontage

Roadway or Railroad (Location)	Relationship to Route (Pipeline MP)	Jurisdiction	Classification	Lanes	Traffic Volume ¹
UPRR (west of Industrial Way)	Crossing (7.4)	Private	–	–	–
Industrial Way (south of Park Road)	Parallel Encroachment (7.4 – 7.8)	City of Benicia	Arterial	2	3,000
UPRR (Industrial Way)	Crossing (7.7)	Private	–	–	–
Interstate 680 (Industrial Way)	Crossing (7.7)	Caltrans	Interstate	4	59,000
Park Road (Industrial Way to Second St)	Parallel Encroachment (7.8 – 8.8)	City of Benicia	Arterial	2	2,700
Second Street (Park Road to Lake Herman Road)	Parallel Encroachment (8.8 – 9.4)	City of Benicia	Arterial	2	6,600
Lake Herman Road (Second St)	Cross Encroachment (9.4)	Solano County	Arterial	2	3,050
Lopes Road (north of Lake Herman Road)	Parallel Encroachment (9.6 – 9.7)	Solano County	Not Classified	2	254
Lopes Road (Quarry House to Stone House)	Parallel Encroachment (10.7 – 11.4)	Solano County	Not Classified	2	254
Lopes Road (south of Parish Road to south of Oak Ridge Lane)	Parallel Encroachment (11.7 – 12.1)	Solano County	Not Classified	2	254
Parish Road (Lopes Road)	Cross Encroachment (11.8)	Solano County	Not Classified	2	NA
Oakridge Lane (west of Lopes Road)	Cross Encroachment (12.3)	Solano County	Not Classified	2	NA
Interstate 680 (1.5 miles southeast of Gold Hill Road)	Crossing (15.4)	Caltrans	Interstate	4	57,000
Ramsey Road (east of I-680)	Parallel Encroachment (15.9 – 16.9)	Solano County	Not Classified	2	242
Smith Drive (east of I-680)	Cross Encroachment (17.5)	Solano County	Not Classified	2	NA

Notes NA = not available

¹ Traffic volumes are expressed as average daily trips usually estimated from 24-hour to 7-day count data. Traffic volume counts for all Caltrans roads were collected during 2001. City of Benicia traffic counts were collected in 1999. The year that Solano County traffic counts were collected is not available.

Source: SFPP, 2002; Caltrans, 2003; Benicia, 2003; Solano County, 2003.

Segment 3 (MP 17.6–24.5) – Cordelia

Along the Cordelia segment of the proposed pipeline route, the pipeline would cross the ROW of the UPRR at three locations and encroach on 10 roadways under the jurisdiction of the City of Benicia, Solano County, and/or the City of Fairfield. See Table D.12-3 for the route milepost that crossings and encroachments that would occur, and the applicable jurisdiction, general classification, number of lanes, and the roadway traffic volumes along Segment 3.

Table D.12-3. Roadway/Railroad Encroachments and Crossings – Cordelia

Roadway or Railroad (Location)	Relationship to Route (Pipeline MP)	Jurisdiction	Classification	Lanes	Traffic Volume¹
Thomason Lane (south of UPRR)	Cross Encroachment (20.3)	Solano County	Not Classified	NA	NA
UPRR (southwest of Chad Borne Road)	Perpendicular (21.7)	Private	–	–	–
Chad Borne Road (north of UPRR)	Cross Encroachment (21.8)	Fairfield	Rural	2	300
UPRR (Chad Borne Road)	Perpendicular (22.0)	Private	–	–	–
Cordelia Road (Orehr Road)	Cross Encroachment (22.9)	Fairfield	Arterial	2	1,920
Orehr Road (Cordelia Road)	Cross Encroachment (22.9)	Fairfield	Rural	2	100
Cordelia Road (Pennsylvania Avenue)	Cross Encroachment (23.6)	Suisun City / Solano County ²	Arterial	2	1,920
Pennsylvania Avenue (Cordelia Road)	Cross Encroachment (23.6)	Suisun	Arterial	2	NA
Cordelia Road (east of Peytonia Slough)	Cross Encroachment (23.8)	Suisun City / Solano County ²	Arterial	2	1,920
UPRR (east of Peytonia Slough)	Crossing (23.8)	Private	–	–	–

Notes: NA = not available

¹ Traffic volumes are expressed as average daily trips usually estimated from 24-hour to 7-day count data. Volumes for Orehr Road and Chad Borne Road are estimates provided by Fairfield that are not based on traffic count data. The count for Cordelia Road was collected in 1997.

² Suisun City has jurisdiction of the north side of Cordelia Road and Solano County has jurisdiction of the south side of the road.

Source: SFPP, 2002; Fairfield, 2003; Solano County, 2003.

Segment 4 (MP 24.5–30.7) – Fairfield/Suisun City

Along the Fairfield/Suisun City segment of the proposed pipeline route, the pipeline would cross the ROW of the UPRR at three locations, cross each of Caltrans' I-680 and Highway 12 at one location, and encroach on nine roadways under the jurisdiction of the City of Suisun City, Solano County, and/or the City of Fairfield. See Table D.12-4 for the route milepost that crossings and encroachments would occur, and the applicable jurisdiction, general classification, number of lanes, and the roadway traffic volumes along Segment 4.

Segment 5 (MP 30.7–65.1) – Solano and Yolo Counties Agricultural Area

Along the Solano and Yolo Counties Agricultural Area segment of the proposed pipeline route, the pipeline would cross an old railroad ROW that is no longer in use at four locations, cross Caltrans' Interstate 80 (I-80), encroach 21 roadways under the jurisdiction of Solano County and/or Yolo County, and encroach on Highway 113 and I-80 on- and off-ramps, which are Caltrans ROWs. See Table D.12-5 for the route milepost that crossings and encroachments would occur, and the applicable jurisdiction, general classification, number of lanes, and the roadway traffic volumes along Segment 5.

Segment 6 (MP 65.1–69.9) – West Sacramento

Along the West Sacramento segment of the proposed pipeline route, the pipeline would cross the ROW of the UPRR at one location, cross Caltrans' I-80 at one location, and encroaches on eight roadways under the jurisdiction of West Sacramento. See Table D.12-6 for the route milepost that crossings and encroachments would occur, and the applicable jurisdiction, general classification, number of lanes, and the roadway traffic volumes along Segment 6.

Table D.12-4. Roadway/Railroad Encroachments and Crossings – Fairfield / Suisun City

Roadway or Railroad (Location)	Relationship to Route (Pipeline MP)	Jurisdiction	Classification	Lanes	Traffic Volume ¹
Highway 12 (east of Webster Street)	Crossing (24.5)	Caltrans	State Highway	4	45,500
UPRR (east of Webster Street)	Crossing (24.8)	Private	–	–	–
Railroad Avenue (Marina Blvd to Village Drive)	Parallel Encroachment (25.3 – 25.8)	Suisun City	Arterial	2	NA
Sunset Avenue (south of Railroad Ave)	Cross Encroachment (26.2)	Suisun City	Arterial	4	20,000
Railroad Avenue (northeast of Sunset Blvd to Village Drive)	Parallel Encroachment (26.2 – 27.2)	Suisun City / Solano County ²	Arterial	2	3,015
East Tabor Avenue (Railroad Ave to Walters Road).	Parallel Encroachment (27.2 – 28.1)	Suisun City / Fairfield / Solano County ³	Arterial	2	8,430
Walters Road (East Tabor Ave to Air Base Parkway)	Parallel Encroachment (28.1 – 28.6)	Fairfield / Solano County ⁴	Arterial	4	12,030
UPRR (Walters Road)	Crossing (28.3)	Private	–	–	–
Air Base Parkway (Walters Road)	Cross Encroachment (28.5)	Fairfield	Collector		NA
Huntington Drive (Walters Road to Peabody Road)	Parallel Encroachment (28.6 – 29.7)	Fairfield	Collector	2	4,810
Peabody Road (Huntington Drive to Vanden Road)	Parallel Encroachment (29.7 – 30.2)	Fairfield / Solano County ⁵	Arterial	2 and 4	24,660
UPRR (Peabody Road)	Crossing (30.1)	Private	–	–	–
Vanden Road (Peabody Road to near school)	Parallel Encroachment (30.2 – 30.7)	Solano County	Arterial	2	4,402

Notes: NA = not available

¹ Traffic volumes are expressed as average daily trips usually estimated from 24-hour to 7-day count data. Caltrans count was collected during 2001. Counts for East Tabor Avenue and Walters Road were collected in 2000 and counts for Huntington Drive were collected in 1996. Volumes for Sunset Avenue and Peabody Road are estimates (not derived from count data) provided by Suisun City and Fairfield, respectively. The year that Solano County traffic counts were collected is not available.

² Suisun City has jurisdiction of the majority of this road segment; however, Solano County has jurisdiction of approximately 0.25 miles of the road segment.

³ Suisun City has jurisdiction of the first 0.10 mile of this road segment; Fairfield has jurisdiction of the last 0.25 mile of the segment and the remainder is split with Fairfield having jurisdiction of the north side and Solano County having jurisdiction of the south side of the road.

⁴ Fairfield has jurisdiction of this road segment to SPT CO RR; north of the RR, Fairfield has jurisdiction of the west side and Solano County has jurisdiction of the east side of this road segment.

⁵ Fairfield has jurisdiction of this road segment to Markley Lane; north of the Markley Lane, Fairfield has jurisdiction of the west side and Solano County has jurisdiction of the east side of this road segment.

Source: SFPP, 2002; Fairfield, 2003; Suisun City, 2003; Solano County, 2003; Caltrans, 2003.

Segment 7 – Wickland Connection

The proposed 4,100-foot pipeline connection from approximate MP 65.6 would continue northeasterly from the main pipeline, parallel to the outboard side of an existing levee that separates West Sacramento and the Yolo Bypass to Wickland's metering station north of West Capitol Avenue in West Sacramento at MP 66.4. The Wickland Connection would not affect any public roads.

Table D.12-5. Roadway/Railroad Encroachments and Crossings – Solano and Yolo Counties Agricultural Area

Roadway or Railroad (Location)	Relationship to Route (Pipeline MP)	Jurisdiction	Classification	Lanes	Traffic Volume¹
Vanden Road (south of school)	Parallel (30.7 – 30.8)	Solano County	Arterial	2	4,402
Vanden Road (0.5 mile northeast of Canon Road)	Cross Encroachment (32.3)	Solano County	Arterial	2	5,091
Meridian Road (south of Hay Road)	Cross Encroachment (34.7)	Solano County	Arterial	2	1,751
Box R Ranch Road (south of Hay Road)	Cross Encroachment (36.5)	Solano County	Not Classified	2	NA
Dally Road (south of Hay Road)	Cross Encroachment (37.3)	Solano County	Not Classified	2	89
Hay Road (east of Dally Road to 0.5 mile east of Burke Lane)	Parallel (37.3 – 38.6)	Solano County	Collector	2	160
Burke Lane (Hay Road)	Cross Encroachment (38.3)	Solano County	Not Classified	2	NA
Highway 113 (Hay Road)	Cross Encroachment (39.8)	Caltrans	State Highway	2	3,200
Robben Road (southwest of Maine Prairie Creek)	Cross Encroachment (42.0)	Solano County	Not Classified	2	129
Prairie Road (old RR ROW)	Cross Encroachment (42.8)	Solano County	Not Classified	2	90
Norton Road (old RR ROW)	Cross Encroachment (43.7)	Solano County	Not Classified	2	46
Old Railroad ROW (south of Binghamton Road)	Cross Encroachment (44.5)	Private	–	–	–
Binghamton Road (old RR ROW)	Cross Encroachment (44.6)	Solano County	Not Classified	2	NA
Old Railroad ROW (north of Binghamton Road)	Crossing (44.7)	Private	–	–	–
Old Railroad ROW (south of Swan Road)	Crossing (45.2)	Private	–	–	–
Swan Road (old RR ROW)	Cross Encroachment (45.3)	Solano County	Collector	2	240
Sikes Road (old RR ROW)	Cross Encroachment (45.5)	Solano County	Not Classified	2	68
Old Railroad ROW (Delhi Road)	Crossing (46.4)	Private	–	–	–
Delhi Road (water canal)	Cross Encroachment (46.5)	Solano County	Not Classified	2	96
Etzel Road (water canal)	Cross Encroachment (47.3)	Solano County	Not Classified	2	20
King Road (west of Yolano Road)	Cross Encroachment (49.1)	Solano County	Arterial	2	567
Midway Road (west of Yolano Road)	Cross Encroachment (50.3)	Solano County	Collector	2	117
Mace Boulevard (old RR ROW)	Cross Encroachment (50.9)	Solano County/ Yolo County ²	Major Collector	2	1,225
Road 38 (old RR ROW)	Cross Encroachment (53.9)	Yolo County	Local Road	2	100
Road 106 (old RR ROW)	Cross Encroachment (54.2)	Yolo County	Local Road	2	520
Road 32 (west of I-80 on/off ramps)	Cross Encroachment (61.1)	Yolo County	Local Road	2	1,870
Interstate 80 (west of Road 32 on/off ramps)	Crossing (61.1)	Caltrans	Interstate	8	129,000
Interstate 80 Westbound off-ramp (to Road 32)	Cross Encroachment (61.1)	Caltrans	Interstate On-Ramp	1	1,940
Interstate 80 Westbound on-ramp (from Road 32)	Cross Encroachment (61.1)	Caltrans	Interstate Off-Ramp	1	130

Notes: NA = not available

¹ Traffic volumes are expressed as average daily trips usually estimated from 24-hour to 7-day count data. Traffic volumes presented for all Caltrans roadways were collected during 2001; volumes presented for Yolo County Roads were collected in 1995 except for County Road 32, which was collected in 2000. The year that Solano County traffic counts were collected is not available.

² Solano County has jurisdiction of the west side of Mace Boulevard and Yolo County has jurisdiction of the east side of the road.
Sources: SFPP, 2002; Caltrans, 2003; Yolo County, 2003; Solano County, 2003.

Table D.12-6. Roadway/Railroad Encroachments and Crossings – West Sacramento

Roadway or Railroad (Location)	Relationship to Route (Pipeline MP)	Jurisdiction	Classification	Lanes	Traffic Volume ¹
West Capital Avenue (west of Granada Inn)	Cross Encroachment (65.6)	West Sacramento	Minor Arterial	4	8,529
Interstate 80 (east of Capital Avenue)	Cross Encroachment (65.6)	Caltrans	Interstate	8	140,000
Enterprise Boulevard (south of I-80)	Parallel Encroachment (65.7 – 65.8)	West Sacramento	Major Arterial	4	19,396
Enterprise Boulevard (North of Industrial Boulevard)	Parallel Encroachment (65.8 – 65.9)	West Sacramento	Major Arterial	4	19,396
Industrial Boulevard (Enterprise Blvd to Terminal St)	Parallel Encroachment (65.9 – 68.1)	West Sacramento	Minor Arterial	4	11,655
Terminal Street (southwest of Industrial Boulevard)	Parallel Encroachment (68.1 – 68.1)	West Sacramento	Collector	2	1,999
UPRR (Terminal Street)	Cross Encroachment (68.1)	Private	–	–	–
Lake Washington Boulevard (north of Sacramento River)	Cross Encroachment (68.4)	West Sacramento	Major Arterial	3	8,727
Jefferson Boulevard (north of Sacramento River)	Cross Encroachment (69.1)	West Sacramento	Major Arterial	2	25,949
South River Road (Jefferson Boulevard to SFPP West Sacramento Station)	Parallel Encroachment (69.1 – 69.8)	West Sacramento	Minor Arterial	2	6,199

¹ Traffic volumes are expressed as average daily trips usually estimated from 24-hour to 7-day count data. Traffic counts for Interstate 80 were collected during 2001. West Sacramento counts were collected in 2002.

Sources: SFPP, 2002; Caltrans, 2003; West Sacramento, 2003.

D.12.1.3 Environmental Setting: Existing Pipeline ROW Alternative

The Existing Pipeline ROW Alternative would be a new pipeline following the route of SFPP's existing 14-inch pipe from Concord to West Sacramento. It would be nearly entirely within UPRR ROW. The route would begin in Concord and travel northward in the UPRR ROW, crossing Waterfront Road to the Carquinez Strait. It would enter Solano County, traveling through Benicia and within the UPRR ROW for the entire route. It would continue along the UPRR ROW northeast across Suisun Marsh and pass through Fairfield. The Existing Pipeline ROW Alternative route would maintain its northeastern travel along the UPRR ROW through the City of Dixon, then enter Yolo County and travel in a more easterly direction to its final destination in West Sacramento, just west of the Sacramento River and the Sacramento County line. The route would continue to follow along the south side of the UPRR ROW until turning south towards West Capitol Avenue.

Although the route is almost entirely within the UPRR ROW, it would perpendicularly encroach a number of arterial, collector, and highway roadways including Cordelia Street, Sunset Avenue, East Tabor Avenue, Air Base Parkway, Peabody Road, Elmira Road, Midway Road, West A Street, Highway 131, Pole Line Road, and Mace Boulevard. In West Sacramento the route would diverge from the UPRR and travel east adjacent to West Capitol Avenue, then south under I-80 onto Enterprise Avenue. The pipeline would turn east onto Industrial Boulevard, travel through lands of the Port of Sacramento at Terminal Street, and join Port Access Road along the north side of the Sacramento River Deep Water Channel. After turning north onto South River Road, the route would enter SFPP's West Sacramento Station.

D.12.1.4 Environmental Setting: No Project Alternative

Under the No Project Alternative, it is assumed that the Proposed Project would not be built and the existing 14-inch Concord to West Sacramento pipeline would continue to be used (see Section 4.12.1.3 for a description of roads in the area of the existing pipeline). However, with increased demand, it is anticipated that truck and rail transport would be needed to supplement the pipeline operations. It is likely that truck transport would utilize local Contra Costa and City of West Sacramento roadways as well as Interstates 680 and 80. Rail transport would utilize the Union Pacific Railroad.

D.12.2 Applicable Regulations, Plans, and Standards

Construction of the Proposed Project could potentially affect roadway conditions, access, traffic flow, and parking on public streets and highways. Therefore, it will be necessary for the Applicant and/or the construction contractor to obtain encroachment permits or similar legal agreements from the public agencies and railroads responsible for each affected roadway or ROW. Such permits are needed for ROWs that would be crossed by the pipeline as well as for the parallel roads where pipeline construction activities would require the use of public ROW. See Tables D.12-1 through D.12-6 for lists of the roadways where construction work would require an encroachment permit. Encroachment permits would be issued by Caltrans; the Counties of Contra Costa, Solano, and Yolo; and the Cities of Benicia, Fairfield, Suisun City, and West Sacramento.

D.12.3 Environmental Impacts and Mitigation Measures for the Proposed Project

D.12.3.1 Introduction

A pipeline is inherently more likely to affect transportation facilities during construction than during operation because there is typically only a minimal amount of surface activity required to operate and maintain a pipeline after construction is complete. Consequently, the traffic/transportation analysis is primarily devoted to the potential impacts that will occur during the construction phase. The following sections describe anticipated construction impacts and suggest detailed mitigation measures that could be used to alleviate potentially adverse traffic impacts.

D.12.3.2 Definition and Use of Significance Criteria

A transportation impact would be considered significant and require additional mitigation if project construction or operation would:

- Result in a short- or long-term decrease in the level of service of a roadway to levels that are considered as significant in a local jurisdiction.
- Cause the closure of an arterial or collector roadway for more than 48 hours consecutively, significantly disrupt access to or from adjacent land uses for more than 14 days, prevent movement of emergency vehicles, conflict with planned transportation projects or adopted public transportation policies, or create noticeable deterioration of roadway surfaces due to restoration of road surface in a manner inconsistent with local requirements.
- Create a safety hazard for vehicles, pedestrians, or rail operations.

D.12.3.3 Impacts of Pipeline Construction

Transportation impacts identified in this section associated with construction of the Proposed Project include:

- Road blockage, equipment safety, and traffic congestion.
- Construction on property access.
- Pedestrian/bicycle circulation and traffic safety.
- Impedance of emergency response.
- Construction traffic volumes and parking.
- Degradation of road conditions.
- Adverse affects to public transit and rail operations.

Detailed discussions of each of these impacts, associated mitigation measures, and residual impacts if applicable, are described below. Section D.12.3.6 describes which impacts and associated mitigation measures apply to each of the proposed route segments.

Impact T-1: Roadway Blockage, Equipment Safety, and Traffic Congestion

The proposed pipeline would be installed within the public ROW in a number of roadways, causing traffic congestion and construction equipment safety hazards. (Potentially Significant, Class II)

Impact Discussion

Typical pipeline construction ROWs that occur in or next to roadways are approximately 50 feet in width and from 500 feet to one mile in length. This area would accommodate the proposed activities of digging a trench, installing the pipe, back-filling, compacting the fill material, and reconstructing/paving the surface area (see Section B.4.4 for pipeline construction methods within the project ROW).

SFPP estimates that a street work spread of approximately 75 people would be required for pipeline construction within public road ROWs and that only one street work spread would be active at one time. SFPP anticipates that it would take approximately 8 months to complete street work associated with the project.

There are two ways pipeline construction activities would affect the roadway network. Construction would either cross a roadway or it would run parallel to a roadway within the public ROW. It should be noted that Interstate highways would be crossed under an overpass or would be bored underneath the roadway in order to not encroach the Interstate ROW. For all other road crossings (except at underpasses), the proposed crossings method is open-cut (SFPP, 2003). At the locations where the pipeline would run parallel to and/or longitudinally within a public road ROW, portions of the roadway that would normally be used for traffic circulation and/or parking would be temporarily unavailable. Detouring around each construction zone would be necessary.

Construction activities within roadways would temporarily displace the equivalent of at least two lanes along each roadway that would be encroached by the proposed route. This displacement would block two travel lanes, one travel lane and the adjacent shoulder/parking area, or just the shoulder/parking area, depending upon the pipeline's lateral placement within the road ROW. It is estimated that lane blockages would last for durations varying between a few days for perpendicular encroachments to two to three weeks for parallel or longitudinal encroachments at any given location.

The proposed pipeline would traverse a number of streets with varying degrees of daily through traffic volumes. Many arterial and collector roadways, as well as rural and local roadways may potentially be blocked for period of at least 48 hours. Therefore, the impacts of pipeline construction on roadway blockage and traffic congestion would be potentially significant, but mitigable (Class II) through the implementation of Mitigation Measures T-1a and T-1b. Although the Project Description (Section B) describes these measures in general terms, they are further detailed below for additional clarity.

During construction activities, a short-term increase in the potential for accidents involving motor vehicles, bicycles, and/or pedestrians would occur. Because of the temporary disruption to traffic flow, the removal of lanes, the presence of construction equipment in the public ROW, and the localized increase in traffic congestion, drivers would be presented with unexpected driving conditions and obstacles. This could potentially result in an increased occurrence of automobile accidents, a significant impact mitigable by implementation of Mitigation Measure T-1b below (Class II).

Mitigation Measure for Impact T-1: Roadway Blockage, Equipment Safety, and Traffic Congestion

- T-1a Limit Lane Closures.** SFPP shall restrict all necessary lane closures or obstructions on arterial and collector roadways to off-peak period in urbanized areas to mitigate traffic congestion and delays that would be caused by lane closures during construction and by exploratory excavations. Lane closures must not occur between 6:00 and 9:30 a.m. and between 3:30 and 6:30 p.m., or as directed in writing by the affected public agency. Alternatively, SFPP shall consider nighttime construction in areas where no residences or other noise sensitive land uses are located within 500 feet, and where traffic impacts could be reduced by avoidance of daytime construction.
- T-1b Traffic Control Plans.** SFPP shall develop and implement detailed Traffic Control Plans (TCPs), prepared by a registered Traffic Engineer for the entire pipeline route at all locations where construction activities would affect the existing transportation system. Input and approval of TCPs shall be obtained from each responsible public agency; copies of approval letters from each jurisdiction must be provided to the CSLC 60 days prior to the start of construction within that jurisdiction. Temporary speed limit restrictions shall be considered within the construction zone. The TCP shall define the use of flaggers, warning signs, lights, barricades, cones, etc. according to standard guidelines required by the affected jurisdiction. Further, the Applicant shall maintain the work site(s), including traffic control, in a safe condition at all times, even outside of normal work hours.
- T-1c Construction Equipment Safety.** When working in or near existing roadways, the Applicant shall ensure that the construction contractor maintains all equipment within work areas designated by the traffic control devices. The Applicant shall also ensure that the construction contractor properly loads equipment onto appropriate trucks and trailers for transport to other work sites; the contractor(s) shall not be allowed to use active roadways to relocate construction equipment that are not licensed for use on public roads. (Backhoes, dozers, and other non-licensed equipment shall not be allowed to use active roadways to re-position themselves to support construction.)

Residual Impact. With implementation of Mitigation Measures T-1a, T-1b, and T-1c, impacts on roadway blockage, equipment safety, and traffic congestions would be less than significant.

Impact T-2: Construction Restricting Property Access

Construction could temporarily block access to and for parking adjacent businesses, residences, and/or other property. (Potentially Significant, Class II)

Impact Discussion

A significant impact (Class II) could occur where access to a parking lot, parking structure, or a critical land use (such as a school, business, residence, or recreation area) would be blocked by construction equipment, activities, or the open trench. This impact can be reduced to a level that is not significant through the application of Mitigation Measures T-2a and T-2b, described below. Although the Project Description (Section B) has described these practices in general terms, they are detailed below for additional clarity.

Mitigation Measure for Impact T-2: Construction Restricting Property Access

- T-2a Minimize Access Concerns.** Prior to finalizing construction plans, SFPP shall work with each jurisdiction to identify all land uses along the ROW with access concerns. SFPP shall develop construction scheduling in a manner that minimizes impacts to businesses, institutions, or residential areas, scheduling construction to avoid the hours or days of the week during which land uses receive the most activity, and avoiding peak traffic times adjacent to residential areas. Construction schedules for work that may restrict access to such land uses shall be approved by the applicable jurisdiction. In addition, SFPP shall ensure that at least one access driveway is left unblocked during all business hours or hours of use. Notices shall be posted along the construction ROW, or schedules shall be provided by SFPP to the landowners or tenants at least 30 days in advance of construction so that they can inform residents or customers. If access problems can be avoided by scheduling night construction in non-residential areas, this option should be considered (see Mitigation Measure T-1a).
- T-2b Notification of Roadway Construction.** Notices shall be posted along the construction ROW that explain the specific location and duration of the pipeline and construction activities within each roadway (e.g., which lane(s) will be blocked, at what times of day, and on what dates) at least 30 days in advance of construction. SFPP shall identify any potential obstructions to property access, and shall make alternative access provisions for each landowner if necessary. The notification shall include a toll-free telephone number and shall encourage affected parties to discuss their concerns with SFPP prior to the start of construction so individual problems and solutions can be identified. Alternative access provisions shall include SFPP-provided signage and alternate parking as provided and approved by local agencies.

Residual Impact. With implementation of Mitigation Measures T-2a and T-2b, impacts to property access would be less than significant.

Impact T-3: Construction Effects on Pedestrian/Bicycle Circulation and Traffic Safety

Construction activities could block pedestrian access or established bicycle routes. (Potentially Significant, Class II)

Impact Discussion

This impact would affect pedestrian/bicycle routes that cross the alignment as well as those that are parallel to the alignment (i.e., sidewalks, shoulders, unpaved paths, and bike trails). This impact is considered to be potentially significant, but mitigable through the implementation of Mitigation Measure T-2b (Class II). Although the Project Description states that SFPP would establish alternative pedestrian access, a recommended practice is detailed in Mitigation Measure T-3a for additional clarity.

Additionally, since there may be disruption to bicycle routes, sidewalks, shoulders, and pedestrian crossings, pedestrians and bicyclists may enter the affected streets and highways and risk a vehicular-related accident. This impact is considered to be significant, but mitigable (Class II) through the implementation of Mitigation Measures T-3a (below) and T-1b (above). Again, although SFPP has indicated it would comply with these measures in general terms, they are detailed below for additional clarity.

Mitigation Measures for Impact T-3: Construction Effects on Pedestrian/Bicycle Circulation and Traffic Safety

T-3a Pedestrian/Bicycle Access. SFPP shall provide alternative pedestrian/bicycle access routes to avoid obstruction to pedestrian/bicycle circulation. Where existing pedestrian circulation routes or bike trails would be obstructed by pipeline construction, alternative access routes shall be developed and signed/marked appropriately, in conjunction with local agencies.

Residual Impact. With implementation of Mitigation Measure T-3a and T-1b, impacts associated with pedestrian/bicycle circulation and traffic safety would be less than significant.

Impact T-4: Impedance of Emergency Response

Pipeline construction activities could block immediate access to emergency response traffic. (Potentially Significant, Class II)

Impact Discussion

Construction activities could interfere with emergency response traffic (ambulance, fire, paramedic, and police vehicles). The loss of lanes and the resulting increase in congestion could lengthen the response time required for emergency vehicles passing through the construction zone. Moreover, there is a possibility that emergency services may be needed at a location where access is temporarily blocked by the construction zone. This impact is considered to be potentially significant, but mitigable to less than significant levels (Class II). Again, although SFPP has described the following measure in general terms in the Project Description, additional specificity is provided below under Mitigation Measure T-4a.

Mitigation Measure for Impact T-4: Impedance of Emergency Response

T-4a Emergency Service Providers. SFPP shall coordinate at least 30 days in advance of construction with emergency service providers to avoid restricting movements of emergency vehicles. Police departments, fire departments, ambulance services, and paramedic services shall be notified in advance by SFPP of the proposed locations, nature, timing, and duration of any construction activities and advised of any access restrictions that could impact their effectiveness. At locations where access to nearby property is blocked, provisions shall be ready at all times to accommodate emergency vehicles, such as plating over excavations, short detours, and alternate routes in conjunction with local agencies. The Traffic

Control Plans (Mitigation Measure T-1b) shall include details regarding emergency service provider coordination and procedures, and copies of the plans shall be provided to all relevant service providers. Documentation of coordination with service providers shall be provided to the CSLC 60 days prior to the start of construction.

Residual Impact. With implementation of Mitigation Measure T-4a, impacts to emergency response would be less than significant.

Impact T-5: Construction Traffic Volumes and Parking Availability

Construction activities would generate additional traffic on roadways in the project area and use existing parking spaces. (Potentially Significant, Class II)

Impact Discussion

Another traffic impact would result from the generation of additional traffic on the roadways in the project area as construction workers, equipment delivery trucks, and excavation trucks travel to and from the pipeline construction zones. During construction, approximately 270 personnel would be employed on the project during the peak construction period. SFPP is proposing to use eight separate construction “spreads”, which at times would operate concurrently. It is anticipated that some of the laborers and crafts would be meeting at the staging yards each morning and would commute to the construction sites in company and/or private work trucks and pickup trucks. The welders would arrive to the construction sites in their welding trucks.

In a reasonable worst-case scenario, it is estimated that approximately 100 workers would arrive at a single staging area in 100 private vehicles. The impacts of employee traffic on specific streets and intersections cannot be determined, as the locations of the staging areas have not yet been established. Parking requirements could result in adverse conditions, but impacts would be less than significant (Class III). Although this impact is considered less than significant, Mitigation Measure T-4a, which provides for approval of these areas with consideration of both traffic and parking impacts, is recommended to reduce the impact further.

In addition to worker traffic, construction activities would generate truck traffic on the streets and highways providing access to the construction sites. Pipe segments estimated to be between 40 and 80 feet long would be delivered to points along the route from their storage locations at the vendor’s coating yard, the existing SFPP stations, or existing storage/rail yards. It is estimated that SFPP would require approximately 370,000 linear feet of pipeline between the Concord and West Sacramento Stations. Based on the construction schedule of eight months, construction would require approximately eight to twelve truck trips per day to haul the pipe to the construction sites.

In addition, trench excavation activities would generate material along the 70.7-mile pipeline route. It is anticipated that approximately half of the excavated soils would be used to backfill the trench. The remaining soil and other debris (e.g., concrete/asphalt rubble) would be disposed of at an approved landfill. It is estimated that approximately 20 dump truck trips would be required to haul away the excavated spoils and debris; where applicable other truck trips would deliver fresh asphalt that would be used to repave road ROWs or other disturbed asphalt areas. Utility vehicles would also arrive and depart from each construction site. The arrival/departure routes for these truck trips would be changing from week to week as the locations of the construction zones would be continually changing.

The automobile traffic generated by construction workers would be at two specific times during the day, arriving at the staging areas and construction sites in the morning and leaving in the afternoon (for a daytime shift). The truck trips would be distributed throughout the day. As compared to the existing traffic volumes on the arterial streets serving the project area, the temporary increase in traffic generated by the construction of the pipeline would be minimal.

The impact of temporary automobile traffic and truck trips would be adverse but not significant (Class III). There may be some locations where construction trucks would create traffic safety and operational problems. These problems could be minimized through development of the Traffic Control Plan (Mitigation Measure T-1a) and coordination on staging area locations (Mitigation Measure T-5a, below).

Mitigation Measure for Impact T-5: Construction Traffic Volumes and Parking Availability

T-5a Coordination on Staging Areas. SFPP shall submit the location of proposed staging area(s) to appropriate local jurisdictions for review and approval. SFPP shall state the size of the area, the purpose (e.g., storage of construction equipment and employee parking), the number of vehicles and pieces of equipment to be stored, and the duration (in number of days and number of hours per day) that each staging area will be used.

Residual Impact. With implementation of Mitigation Measures T-1a and T-5a, impacts associated with construction traffic and vehicle and equipment parking would remain less than significant.

Impact T-6: Degradation of Road Conditions

Pipeline construction could damage roadways. (Potentially Significant, Class II)

Impact Discussion

This impact is associated with physical disturbance to the road itself, rather than traffic congestion and safety. There is the potential for road surfaces to be damaged or altered during construction, first as a result of trenching and repaving, and also as a result of heavy equipment traffic. In particular, road drainage features (e.g., structures or rolling dips in the road) and pavement may be damaged by construction vehicles or improper restoration techniques. This impact is considered significant, but mitigable to less than significant levels with implementation of Mitigation Measure T-6a (Class II).

Mitigation Measure for Impact T-6: Degradation of Road Conditions

T-6a Restoration of Roads. Roads disturbed by construction activities or construction vehicles shall be restored to at least pre-construction conditions to ensure long-term protection of road surfaces. Care shall be taken to prevent damage to roadside drainage structures. Roadside drainage structures and road drainage features (e.g., rolling dips) shall be protected by regrading and reconstructing roads to drain properly. These measures shall be incorporated into an access agreement/easement with the applicable governing agency prior to construction.

Residual Impact. With implementation of Mitigation Measure T-6a, impacts of construction on road conditions would be less than significant.

Impact T-7: Disruption of Public Transit Services

Construction activities could physically block bus routes resulting in the disruption of transit services. (Potentially Significant, Class II)

Impact Discussion

The primary impact regarding public transit would be the effect of pipeline construction on buses that travel on the roadways that will be physically blocked by construction activities. The loss of lanes on the roadways described in the above discussion would result in disruption to transit service. Buses could continue to operate, as the streets would not be totally blocked; however, there would be traffic delays and some bus stops would be rendered temporarily inaccessible for a period of up to one week if they are located immediately adjacent to the pipeline route.

Impacts on bus traffic could be reduced to a level that is not significant (Class II) through the implementation of Mitigation Measure T-7a. Although SFPP has described this practice in general terms through the Project Description, it is detailed below for additional clarity.

Mitigation Measure for Impact T-7: Disruption of Public Transit Services

T-7a Coordinate with Public Transit. SFPP shall coordinate at least 30 days in advance with public transit agencies to avoid disruption to transit operations. Public transit agencies that operate bus routes on the roadways potentially affected by the proposed construction activities shall be informed in advance of the pipeline project and the potential impacts at bus stop locations. Alternate pickup/dropoff locations shall be determined and signed appropriately. SFPP shall document coordination with transit agencies and provide documentation of this coordination to the CSLC 60 days prior to the start of construction.

Residual Impact. With implementation of Mitigation Measure T-7a, impacts to public transit operations would be less than significant.

Rail Operations

The project would not affect railroad operations during project construction because all rail crossing would be directionally bored from outside of the railroad ROW. There would be no impacts on rail operations, as train movements would not be disrupted and all railroad safety requirements would be met. Access would be maintained at all rail passenger stations during operating hours. The depth from the base of railroad rail to top of pipeline casing at its closest point shall not be less than 4.5 feet (SFPP, 2003b).

D.12.3.4 Impacts of Pipeline Accidents

Impact T-8: Pipeline Accident Affecting Roadways or Traffic Flow

A rupture or leak of the proposed pipeline could result in the closure or restriction of use of a roadway. (Potentially Significant, Class II)

Impact Discussion

It is estimated that approximately 15 miles of the proposed pipeline would be located within road ROWs. According to spill frequency data generated for this project, a medium spill (more than 100 barrels) would occur every 1,199 years on a given 1-mile segment (see Section D.2). Therefore, it is

estimated that a medium spill would occur within a road ROW approximately every 80 years. In the event of a pipeline rupture or leak, significant impacts associated with blocked traffic lanes, restricted access, disruption of pedestrian/bicycle traffic, blocked emergency response, damage to road features and surfaces, and rail operations could result as partial or complete closures of transportation facilities may be required.

Mitigation Measures for Impact T-8: Pipeline Accident Affecting Roadways or Traffic Flow

Impact T-8 would be considered potentially significant but mitigable to less than significant levels (Class II) through the implementation of Mitigation Measures T-1a, T-1b, T-1c, T-2a, T-2b, T-3a, T-4a, T-6a, and T-7a.

Residual Impact: With implementation of the mitigation measures listed above, impacts would be less than significant.

D.12.3.5 Impacts of Pipeline Operation

Operation of the proposed pipeline would have negligible impacts on the area's transportation system under normal circumstances as only inspection and maintenance activities would generate vehicular traffic. If a major pipeline repair were required at a particular location, the temporary transportation impacts would be similar to the construction impacts addressed above for each location and the applicable mitigation measures would continue to apply.

As described in Section B.5.1, the proposed pipeline and Concord Station upgrades would be operated from SFPP's Concord Station and monitored from the central control facility at the Orange Headquarters. The Sacramento Station would continue to be operated from the Orange Headquarters. No additional positions to SFPP's existing staff would be required as a result of this project. Therefore, no traffic impacts would result from additional workers commuting to the control center or stations.

D.12.3.6 Impacts by Segment

Segment 1 (MP 0–6.1) – Contra Costa County and Carquinez Strait

Pipeline construction activities in Contra Costa County would require encroachments of three County roadways including a 0.83-mile parallel encroachment of a collector road and a perpendicular encroachment of an arterial rural road (see Table D.12-1). Therefore, Mitigation Measures T-1a, T-1b, T-1c, T-2a, T-2b, T-3a, T-4a, T-6a, and T-7a must be implemented in this segment to reduce impacts associated with blocked traffic lanes, restricted access, disruption of pedestrian/bicycle traffic, blocked emergency response, damage to road features and surfaces, and impacts to public transportation, to levels that are less than significant (Class II). In addition to roadways, the pipeline would cross two active railroad ROWs (see Table D.12-1). However, no impacts would occur because the crossings would be bored. In addition, temporary automobile and truck trip traffic and parking impacts would result in a less than significant impact (Class III). However, Mitigation Measure T-5a would reduce this impact further.

Phase 1 Carquinez Strait Crossing

Construction activities associated with the Phase 1 Carquinez Strait crossing would occur on private property owned by Rhodia, and would not directly encroach public roads. Therefore, direct impacts to road transportation and traffic would be minimal. However, there is a possibility that construction

vehicles that would be needed to haul heavy equipment and materials to the construction sites could damage existing private road surfaces or features. Implementation of Mitigation Measure T-6a would reduce this potential impact to less than significant levels (Class II). In addition, temporary automobile and truck trip traffic and parking impacts would result in a less than significant impact (Class III), but Mitigation Measure T-5a would reduce this impact further.

Phase 2 Carquinez Strait Crossing

Construction impacts associated with the Phase 2 Carquinez Strait Crossing would essentially be the same as those described above for Phase 1. No public roadway ROWs would be affected.

Segment 2 (MP 6.1–17.6) – Benicia and I-680 Frontage

Pipeline construction activities associated with Segment 2 would require 11 encroachments of City of Benicia and Solano County roadways, including over four miles of parallel encroachments (see Table D.12-2). Four of these encroachments would occur on arterial roadways. Therefore, Mitigation Measures T-1a, T-1b, T-1c, T-2a, T-2b, T-3a, T-4a, T-6a, and T-7a apply to this segment and would reduce impacts associated with blocked traffic lanes, restricted access, disruption of pedestrian/bicycle traffic, blocked emergency response, damage to road features and surfaces, and impacts to public transportation to levels that are less than significant (Class II). It should be noted that although the pipeline would cross I-680 in two locations along this segment (see Table D.12-2), the crossings would be either constructed under an I-680 overpass or by bore so that I-680 would not physically be disturbed. The pipeline would cross an active railroad ROW twice (see Table D.12-2). However, no impacts would occur because the crossings would be bored. In addition, temporary automobile and truck trip traffic and parking impacts would result in a less than significant impact (Class III), but Mitigation Measure T-5a would reduce this impact further.

Segment 3 (MP 17.6–24.5) – Cordelia

Pipeline construction activities associated with Segment 3 would require seven perpendicular encroachments of Solano County, City of Fairfield, and Suisun City roadways (see Table D.12-3). Four of these encroachments would occur on arterial roadways. Therefore, Mitigation Measures T-1a, T-1b, T-1c, T-2a, T-2b, T-3a, T-4a, T-6a, and T-7a apply to this segment and would reduce impacts associated with blocked traffic lanes, restricted access, disruption of pedestrian/bicycle traffic, blocked emergency response, damage to road features and surfaces, and impacts to public transportation to levels that are less than significant (Class II). The pipeline would cross an active railroad ROW three times (see Table D.12-3). However, no impacts would occur because the crossings would be bored. In addition, temporary automobile and truck trip traffic and parking impacts would result in a less than significant impact (Class III), but Mitigation Measure T-5a would reduce this impact further.

Cordelia Mitigation Segment

This mitigation segment was developed to avoid sensitive biological and water resources within Cordelia Marsh and Slough. The 2.6-mile segment diverges from the proposed route at MP 17.6 and rejoins the proposed route at approximately MP 20.0. The Cordelia Mitigation Segment parallels Ramsey Road until Cordelia Road, where it continues along Cordelia Road to the UPRR ROW where it rejoins the proposed route (see Figure D.4-3).

Use of the Cordelia Mitigation Segment would result in the direct disturbance of two Solano County arterial roadways (Ramsey Road and Cordelia Road). Therefore, Mitigation Measures T-1a, T-1b,

T-1c, T-2a, T-2b, T-3a, T-4a, T-6a, and T-7a should be applied to this segment to reduce impacts associated with blocked traffic lanes, restricted access, disruption of pedestrian/bicycle traffic, blocked emergency response, damage to road features and surfaces, and impacts to public transportation to levels that are less than significant (Class II). The Proposed Project route segment in this area would not encroach on any public roads. Therefore, the Proposed Project route segment is preferred over the Cordelia Mitigation Segment.

Segment 4 (MP 24.5–30.7) – Fairfield/Suisun City

Pipeline construction activities associated with Segment 4 would require nine encroachments of Suisun City, Solano County, and City of Fairfield roadways, including over five miles of parallel encroachments (see Table D.12-4). All of the nine encroachments would occur on either arterial or collector roadways. Therefore, Mitigation Measures T-1a, T-1b, T-1c, T-2a, T-2b, T-3a, T-4a, T-6a, and T-7a apply to this segment and would reduce impacts associated with blocked traffic lanes, restricted access, disruption of pedestrian/bicycle traffic, blocked emergency response, and damage to road features and surfaces, and impacts to public transportation to levels that are less than significant (Class II). Although the pipeline would cross Highway 12 along this segment (see Table D.12-4), line drawings developed by SFPP (SFPP, 2002) indicate that the crossing would be constructed under a Highway 12 overpass so that Highway 12 would not physically be disturbed. The pipeline would cross an active railroad ROW three times along this segment (see Table D.12-4). However, no impacts would occur because the crossings would be bored. In addition, temporary automobile and truck trip traffic and parking impacts would result in a less than significant impact (Class III), but Mitigation Measure T-5a would reduce this impact further.

Segment 5 (MP 30.7–65.1) – Solano and Yolo Counties Agricultural Area

Pipeline construction activities associated with Segment 5 would require 21 encroachments of Solano County and Yolo County roadways, including approximately 1.5 miles of parallel encroachments (see Table D.12-5). Seven of these encroachments would occur on either collector or arterial roadways. Therefore, Mitigation Measures T-1a, T-1b, T-1c, T-2a, T-2b, T-3a, T-4a, T-6a, and T-7a apply to this segment and would reduce impacts associated with blocked traffic lanes, restricted access, disruption of pedestrian/bicycle traffic, blocked emergency response, damage to road features and surfaces, and impacts to public transportation to levels that are less than significant (Class II).

The pipeline would cross three Caltrans ROWs, including Highway 113, I-80, and I-80 on- and off-ramps. The crossings associated with the I-80 on- and off-ramps would be constructed with open trenching techniques. Therefore, Mitigation Measures T-1a, T-1b, T-1c, T-2a, T-2b, T-3a, T-4a, T-6a, and T-7a would apply. The crossing associated with I-80 would be constructed under the I-80 so that the I-80 ROW would not physically be disturbed. The pipeline would not cross any active railroads along this segment (see Table D.12-5). In addition, temporary automobile and truck trip traffic and parking impacts would result in a less than significant impact (Class III), but Mitigation Measure T-5a would reduce this impact further.

Segment 6 (MP 65.1–69.9) – West Sacramento

Pipeline construction activities associated with Segment 6 would require eight encroachments of City of West Sacramento roadways, including approximately more than three miles of parallel encroachments (see Table D.12-6). All eight of the encroachments would occur on either collector or arterial roadways. Therefore, Mitigation Measures T-1a, T-1b, T-1c, T-2a, T-2b, T-3a, T-4a, T-6a, and T-7a apply to this segment and would reduce impacts associated with blocked traffic lanes, restricted access,

disruption of pedestrian/bicycle traffic, blocked emergency response, damage to road features and surfaces, and impacts to public transportation to levels that are less than significant (Class II). The crossing associated with I-80 would be constructed under the I-80 overpass or would be bored so that the I-80 ROW would not physically be disturbed. The pipeline would cross an active railroad ROW once along this segment (see Table D.12-6). However, no impacts would occur because the crossings would be bored. In addition, temporary automobile and truck trip traffic and parking impacts would result in a less than significant impact (Class III), but Mitigation Measure T-5a would reduce this impact further.

Segment 7 – Wickland Connection

Construction activities associated with the Wickland Connection would not directly encroach public roads. Therefore, direct impacts to road transportation and traffic would be minimal. However, there is a possibility that construction vehicles that would be needed to haul heavy equipment and materials to the construction site could damage road surfaces or features. Implementation of Mitigation Measure T-6a would reduce this potential impact to less than significant levels (Class II). No active rail ROWs would be crossed. In addition, temporary automobile and truck trip traffic and parking impacts would result in a less than significant impact (Class III), but Mitigation Measure T-5a would reduce this impact further.

D.12.3.7 Impacts of Proposed Station Changes

SFPP is proposing terminal modifications at its Concord and Sacramento Stations as a part of the Proposed Project (refer to Section B.3.3 for description of the planned modifications). The hauling of construction materials and the movement of equipment onto and off each site would be staggered over time and would not impose significant impacts on the circulation infrastructure. All terminal-related modifications would occur within the boundaries and easements of the existing facilities. Damage to the surface of adjacent roadways is expected to be minimal and any roadway damage would be repaired with the implementation of Mitigation Measure T-6a. Overall, transportation and traffic impacts of station modifications would be adverse (Class III) but not significant.

D.12.3.8 Cumulative Impacts

As presented in Table E-1, a number of reasonably foreseeable projects have been identified within the study area. The projects consist of proposed commercial, industrial, and residential land uses, and planned infrastructure improvements such as road widening and rehabilitation projects. Some of the proposed projects would be located in the immediate vicinity of or immediately adjacent to the Proposed Project route, such as the East Second Street Road Widening, Park Road sewer lift station/sewer force main, Street Overlay of Park Road, 36-inch raw water transmission main, Wolfskill Energy Center, and the Fairfield-Vacaville Train Station. These cumulative projects could potentially exacerbate the construction impacts of the Proposed Project or Existing Pipeline ROW Alternative.

The City of Fairfield has expressed concern that construction of two of its proposed projects (the Peabody Bridge and the Fairfield-Vacaville Train Station projects) may conflict with construction of SFPP's Proposed Project. The City wants to avoid future cost associated with rerouting the pipeline to accommodate the bridge project. In addition, if the pipeline project were to cross the train station site, it could limit construction of commercial properties or other train station related improvements (Fairfield, 2003b).

However, all construction work within local roadways will require an encroachment permit from the appropriate local jurisdiction. Therefore, proper coordination and planning between the Applicant and the appropriate agencies to avoid potential impacts of plans of other infrastructure projects and would ensure that safe vehicle, pedestrian and bicycle access, and circulation is maintained. The Proposed Project would not require additional mitigation measures beyond those identified (Class II).

D.12.4 Environmental Impacts and Mitigation Measures for Existing Pipeline ROW Alternative

The Existing Pipeline ROW Alternative would follow the route of SFPP's existing 14-inch pipe from Concord to West Sacramento. It would be almost entirely within UPRR ROW. Although the route is almost entirely with the UPRR ROW, it would cross encroach a number of arterial, collector, and highway roadways. In West Sacramento the route diverges from the UPRR and travels east within West Capitol Avenue, Industrial Boulevard, Port Access Road, and South River Road.

Mitigation Measures T-1a, T-1b, T-1c, T-2a, T-2b, T-3a, T-4a, T-6a, and T-7a would apply to this Alternative and would reduce impacts associated with blocked traffic lanes, restricted access, disruption of pedestrian/bicycle traffic, blocked emergency response, damage to road features and surfaces, and impacts to public transportation to levels that are less than significant (Class II). In addition, temporary automobile and truck trip traffic and parking impacts would result in a less than significant impact (Class III), but Mitigation Measure T-5a would reduce this impact further.

With the exception of impacts to railroad described below (Impact T-9), the types of impacts and mitigation measures associated with the Existing Pipeline ROW Alternative would be essentially the same as those that would occur under the Proposed Project. However, there would be fewer road encroachments that would create potentially significant impacts as a result of the Existing Pipeline ROW Alternative compared to the Proposed Project. Therefore, the Existing Pipeline ROW Alternative would be preferred over the Proposed Project with regard to transportation and traffic.

Mitigation Segments EP-1 and EP-2

Two mitigation segments are suggested for the Existing Pipeline ROW Alternative, one (EP-1) suggested to reduce biological resources impacts and one (EP-2) to reduce land use impacts. Both EP-1 and EP-2 require the installation of the pipeline within or immediately adjacent to a number of public roadways, versus installation within the UPRR ROW as proposed by the Existing Pipeline ROW Alternative. As EP-1 and EP-2 would induce additional short-term construction impacts to roads, the Existing Pipeline ROW Alternative is preferred over both of these mitigation segments.

Impact T-9: Disruption of Rail Operations

Construction activities within the railroad ROW could disturb railroad operations. (Less than Significant, Class III)

As stated above, the pipeline would be located in an active railroad ROW along most of this alternative route. The Existing Pipeline ROW Alternative would have only minor effects on railroad operations during project construction because all rail crossings would be bored, resulting from the presence of construction equipment and activities in the ROW. There would be no significant impacts on rail operations, as train movements would not be disrupted and all railroad safety requirements would be met. Access would be maintained at all rail passenger stations during operating hours. Overall, the

impact to rail operations associated with the Existing Pipeline ROW Alternative would be adverse, but not significant (Class III). Measure T-9a would help to further reduce any potential impact to rail operations.

Mitigation Measure for Impact T-9: Disruption of Rail Operations

T-9a Coordinate with Rail Operators. For construction of the Existing Pipeline ROW Alternative, SFPP shall coordinate issues of construction compatibility of rail operations with Amtrak and Union Pacific Railroad. SFPP and contractors shall plan and implement all activities within the railroad ROW with the appropriate railroad personnel. Railroad representatives shall be on site at all times during construction along active rail lines, if required. SFPP shall submit documentation of coordination with rail operators to the CSLC 60 days prior to construction.

Residual Impact. With implementation of Mitigation Measure T-9a, impacts associated to rail operations associated with the Existing Pipeline ROW Alternative would remain less than significant.

D.12.5 Environmental Impacts of the No Project Alternative

Under the No Project Alternative, the project would not be constructed and a No Project Alternative scenario would be initiated. The Proposed Alternative scenario would likely involve construction activities associated with repair or replacement of between 6 and 9 miles of existing pipeline between Concord and Sacramento to increase throughput. Some of the construction activities could temporarily block traffic causing potentially significant impacts. In addition, the No Project Alternative scenario may include an increase in tanker truck and/or train traffic in the region, and accidental spills on road ROWs that would require temporary lane closures for cleanup would be more likely to occur.

An increase in tanker truck and/or train traffic that may be required to serve the demand over what can be accommodated through modification of SFPP's existing pipeline would likely result in less than significant traffic impacts (Class III) when compared to the existing traffic levels in the project area.

D.12.6 Mitigation Monitoring, Compliance, and Reporting Table

Table F-11 presents the mitigation monitoring program for transportation and traffic.